

Application No. 10/762,786
Amendment dated September 8, 2006
Response to Office Action dated June 8, 2006

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REMARKS

Claims 2, 3, 11-14, and 22-60 been canceled, and the various rejections of these claims are deemed moot. Claims 1 and 4-8 have been amended. Claims 61-80 are withdrawn by the Examiner. Claims 81-87 have been added. Favorable reconsideration and continued examination of this application are respectfully requested.

Rejection of Claims Under 35 U.S.C. §112, Second Paragraph

In the Office Action at page 3, claims 1-60 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. The term "at least about" in claims 1, 22, and 37 is objected to. The objected to term has been deleted from claim 1, and claims 22 and 37 have been canceled. The remaining pending objected-to claims depend from the amended claims and should be allowable for the reasons set forth herein. Therefore, this objection is traversed. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action it was asserted that the units of the permeability coefficient were unclear. The permeability units have been deleted from the claims. Therefore, this objection is traversed. Reconsideration and withdrawal of the objection are respectfully requested.

At page 4 of the Office Action, claims 49-55 are rejected for antecedent basis issues. These claims have been canceled rendering this rejection moot. This rejection is traversed. Reconsideration and withdrawal of the rejection are respectfully requested.

Application No. 10/762,786
Amendment dated September 8, 2006
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Rejection of Claims under 35 U.S.C. §102

In the Office Action at pages 4-16, claims 1, 3-6, 8, 10-13, 15, 17, 19-22, 24-34, 36-39, 41-44, 46-51, and 56-59 are rejected under 35 U.S.C. §102(b) as being anticipated by Unger et al. (U.S. Patent Publication No. 2002/0029814 A1). Applicants respectfully traverse this rejection.

Claim 1 has been amended to even more particularly point out the various aspects of the present teachings. Support for the amendment can be found in, for example, throughout the specification, in paragraphs [00030] and [00031], and in Fig. 2. As amended, claim 1 now recites a sample-containment region plate and at least one sample-containment region formed therein. Disposed on top of the sample-containment region is a lid plate having an outlet opening through the top surface thereof and in fluid communication with the at least one sample-containment region. The claim further describes a sample sealing plug disposed in and plugging the outlet channel, with the plug comprising a polysiloxane material.

New claims 81-87 further define the claimed microfluidic device and include additional features that are also neither disclosed nor suggested by Unger et al. or any of the cited art. For example, claim 81 recites a sample-containment region plate that comprises multiple through-holes. Claims 82-85 recite a substrate support than can comprise pads for sealing the through-holes of the sample-containment region plate. Claim 85 further features a substrate support and a sample-containment region plate that are hinged together.

Unger fails to teach or suggest the unique combination of features as described in claim 1, or in the new claims. In particular, Unger fails to teach or suggest a device having lid plate comprising an outlet opening extending though the lid plate, and connecting the lid plate's top

Application No. 10/762,786
Amendment dated September 8, 2006
Response to Office Action dated June 8, 2006

surface to at least one sample-containment region defined in a sample-containment region plate. Unger et al. also does not disclose a sealing plug disposed in, and plugging, such an outlet opening. Therefore, claim 1 should be allowable. Claims 4-10, and 15-21 depend from claim 1, and should also be allowable for the same reasons. Claims 2, 3, 11-14, and 22-60 have been canceled; thus, the rejection of these claims is deemed moot. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims under 35 U.S.C. §103

In the Office Action at pages 17-20, claims 1, 2, 22, 23, 37, and 40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Unger et al. (U.S. Patent Publication No. 2002/0029814 A1) as defined by Wikipedia (http://en.wikipedia.org/wiki/Pounder-force_per_square_inch) in view of Wilding et al. (U.S. Patent No. 5,587,128). Applicants respectfully traverse this rejection.

Wilding et al. does nothing to rectify the deficits Unger et al. with regard to claim 1, in that Wilding et al. does not disclose any of the recited structures missing from Unger et al. Even if combined, the teachings of these references do not achieve the claimed invention. Claims 2, 22, and 23 depend from claim 1, and should also be allowable for the same reasons. Claims 37 and 40 have been canceled, rendering the rejection of these claims moot. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action at pages 20-21, claims 1, 7, 37, and 45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Unger et al. (U.S. Patent Publication No. 2002/0029814 A1) in view of Dvornic et al. (U.S. Patent Publication No. 2003/0088024 A1). Applicants respectfully

Application No. 10/762,786
Amendment dated September 8, 2006
Response to Office Action dated June 8, 2006

traverse this rejection.

Dvornic et al. does nothing to rectify the deficits Unger et al. with regard to claim 1, in that Dvornic et al. does not disclose any of the recited structures missing from Unger et al. Even if combined, the teachings of these references do not achieve the claimed invention. Claim 7 depends from claim 1, and should also be allowable for the same reasons. Claims 37 and 45 have been canceled, rendering the rejection of these claims moot. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action at pages 21-22, claims 1, 14, 22, 35, 37, 55, and 60 are rejected under 35 U.S.C. §103(a) as being unpatentable over Unger et al. (U.S. Patent Publication No. 2002/0029814 A1) in view of Rahbar-Dehlghan (U.S. Patent Publication No. 2002/0015149 A1). Applicants respectfully traverse this rejection.

Rahbar-Dehlghan does nothing to rectify the deficits Unger et al. with regard to claim 1, in that Rahbar-Dehlghan does not disclose any of the recited structures missing from Unger et al. Even if combined, the teachings of these references do not achieve the claimed invention. In particular, Rahbar-Dehlghan does not disclose or suggest a lid plate comprising an outlet opening in fluid communication with at least one sample-containment region. Claim 7 depends from claim 1, and should also be allowable for the same reasons. Claims 22, 35, 37, 55, and 60 have been canceled, rendering the rejection of these claims moot. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action at pages 22-23, claims 1, and 16-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Unger et al. (U.S. Patent Publication No. 2002/0029814 A1) in

Application No. 10/762,786
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view of Gong et al. (U.S. Patent Publication No. 2003/0138941). Applicants respectfully traverse this rejection.

It is asserted in the Office Action that Gong et al. teaches a device comprising channels and reaction chambers with dried samples therein. However, these teaching do nothing to rectify the deficits Unger et al. with regard to claim 1, in that Gong et al. does not disclose any of the recited structures missing from Unger et al. Even if combined, the teachings of these references do not achieve the claimed invention. Claims 16-18 depend from claim 1, and should also be allowable for the same reasons. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action at pages 23-24, claims 37 and 52-54 are rejected under 35 U.S.C. §1003(a) as being unpatentable over Unger et al. (U.S. Patent Publication No. 2002/0029814 A1) in view Barbera-Guillem et al. (U.S. Patent Publication No. 2002/0172621 A1). Applicants respectfully traverse this rejection.

Claims 37 and 52-54 have been canceled, rendering the rejection of these claims moot. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action at pages 25-27, claims 37 and 55 are rejected under 35 U.S.C. §103(a) as being unpatentable over Unger et al. (U.S. Patent Publication No. 2002/0029814 A1) in view of Barbera-Guillem et al. (U.S. Patent Publication No. 2002/0172621 A1), and further in view of Rahbar-Dehlghan (U.S. Patent Publication No. 2002/0015149 A1). Applicants respectfully traverse this rejection.

Claims 25-27, claims 37 and 55 have been canceled, rendering the rejection of these claims moot. Reconsideration and withdrawal of the rejection are respectfully requested.

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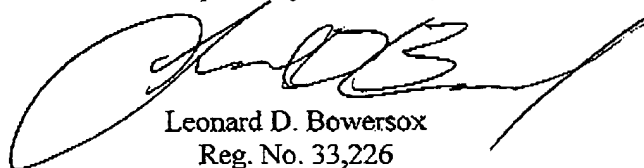
CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests favorable reconsideration of the present application and a timely allowance of the pending claims.

Should the Examiner deem that any further action by Applicant or Applicant's undersigned representative is desirable and/or necessary, the Examiner is invited to telephone the undersigned at the number set forth below.

If there are any other fees due in connection with the filing of this response, please charge the fees to deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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